

What is claimed is:

1. A zoom lens device comprising:

a zoom lens system having a plurality of lens units; and

an image sensor converting an optical image formed by the zoom lens system,
into electric image data.,

wherein lens surfaces constituting the zoom lens system are all refracting
surfaces,

wherein zooming is performed by varying the distances between the lens units,
and

wherein following conditions are satisfied:

$$3.1 \leq f_w/f_t \leq 5.5$$

where f_w is the focal length of the zoom lens system in the shortest focal length
condition, and f_t is the focal length of the zoom lens system in the longest focal length
condition.

2. A zoom lens system as claimed in claim 1, wherein the zoom lens

systems of the embodiments satisfy the following condition:

$$0.1 < T_{23w}/f_w < 1.5$$

where T_{23w} is the axial distance between the second lens unit (most image side) and
the adjoining lens unit on the image side (most object side) in the shortest focal length
condition, and f_w is the focal length of the zoom lens system in the shortest focal length
condition.

3. A zoom lens system as claimed in claim 1, wherein the zoom lens

systems of the embodiments satisfy the following condition:

$$0.6 < T_{\text{sum}}/f_w < 2.6$$

where T_{sum} is the sum of the axial thicknesses of all the lens elements included in the zoom lens system; and f_w is the focal length of the zoom lens system in the shortest focal length condition.

4. A zoom lens system as claimed in claim 1, wherein the zoom lens systems of the embodiments satisfy the following condition:

$$v_1 > 45$$

where v_1 is the Abbe number of the single negative lens element constituting the first lens unit.

5. A zoom lens device as claimed in claim 1, wherein the first lens unit moves so as to draw a locus of a U-turn convex to the image side in zooming from the shortest focal length condition to the longest focal length condition.

6. A zoom lens device as claimed in claim 1, wherein the first lens unit includes at least one aspherical surface.

7. A zoom lens device as claimed in claim 1, wherein the focusing is performed by moving along the optical axis either a positive lens unit or a single lens element disposed in a position on the image side of a diaphragm and not included in the most image side lens unit.

8. A zoom lens device as claimed in claim 1, wherein the zoom lens system consists of, from the object side:

the first lens unit;
the second lens unit; and
a third lens unit having a positive optical power.

9. A zoom lens device as claimed in claim 1, wherein the zoom lens system consists of, from the object side:

the first lens unit;
the second lens unit;
a third lens unit having a positive optical power; and
a fourth lens unit having a positive optical power.

10. A digital camera comprising:
a zoom lens device including a zoom lens system and an image sensor;
the image sensor converting an optical image formed by the zoom lens system,
into electric image data,

the zoom lens system having a plurality of lens units including a first lens unit disposed on the most object side and consisting of a single negative lens element;; and
wherein lens surfaces constituting the zoom lens system are all refracting surfaces,

wherein zooming is performed by varying the distances between the lens units,
and

wherein following conditions are satisfied:

$$3.1 \leq f_w/f_t \leq 5.5$$

where f_w is the focal length of the zoom lens system in the shortest focal length condition, and f_t is the focal length of the zoom lens system in the longest focal length

condition.